

What I claim is:

1) A tunable band pass optical filter comprising:

5 a frame;  
at least one translation plate;  
at least one flexure element for mounting said at least one translation plate to said frame;  
10 a first mirror mounted to said at least one translation plate;  
a second mirror mounted to said frame in optical communication with said first mirror,  
having a distance between said first and said second mirror;  
at least one compensation screw operatively connected to said frame and said at least  
one translation plate; and  
15 at least one piezo-ceramic actuator operatively connected to said frame and said at least  
one translation plate.

2) The tunable band pass optical filter of claim 1 wherein said at least one translation plate  
includes a second translation plate; wherein said at least one flexure element includes a second  
flexure element for mounting said second translation plate to said frame; and  
wherein said second mirror is mounted to said second translation plate.

3) The tunable band pass optical filter of claim 2 wherein said at least one compensation  
screw includes a second compensation screw.

4) The tunable band pass optical filter of claim 2 wherein said at least one piezo-ceramic  
actuator includes a second piezo-ceramic actuator.

5) The tunable band pass optical filter of claim 1 further including a spherical element  
interposed between said at least one piezo-ceramic actuator and said at least one translation plate.

6) The tunable band pass optical filter of claim 4 further including a spherical element  
interposed between said at least one piezo-ceramic actuator and said at least one translation plate.

7) The tunable band pass optical filter of claim 1 further including a position sensor  
operatively connected to said at least one translation plate.

8) The tunable band pass optical filter of claim 7 wherein said position sensor operates in a  
closed-loop system for adjusting said distance.

40 9) A tunable band pass optical filter of claim 1, further including a light input port and a light  
output port.

10) A tunable band pass optical filter of claim 9, further including a light source.

45 11) A tunable band pass optical filter of claim 9, further including at least one light collector.

12) A tunable band pass optical filter of claim 11, wherein said at least one light collector includes a fiber optic tap coupler in optical alignment with said first and said second mirror.

13) A tunable band pass optical filter of claim 12, further including a photodiode operatively connected to said fiber optic tap coupler.

14) A tunable band pass optical filter of claim 10, further including a light collimator operatively coupled to said light source and said input port.

15) A tunable band pass optical filter of claim 10, wherein said light collimator is a monomode fiber.

16) A tunable band pass optical filter of claim 8 wherein said closed-loop system includes a controller for actuating said at least one piezo-ceramic actuator.

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16) A tunable band pass optical filter of claim 8 wherein said closed-loop system includes a controller for actuating said at least one piezo-ceramic actuator.